CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Presentation By The San Joaquin County Mosquito & Vector Control District Regarding Its Activities, Operations, And Services

MEETING DATE: August 1, 2001

PREPARED BY: City Clerk

RECOMMENDED ACTION: None required.

BACKGROUND INFORMATION: The Mayor received the attached letter from the San Joaquin County Mosquito & Vector Control District asking if it could appear before the Council to provide a short presentation regarding District activities, operations, and services provided to the residents and visitors of Lodi.

Mr. Aaron Devencenzi, Community Education Specialist with the District, has provided the attached information and will be at the meeting to make a 15-minute presentation to the City Council on the subject.

FUNDING: None required.

Susan J. Blackston
City Clerk

SJB/JMP

APPROVED: _____
H. Dixon Flynn -- City Manager

SAN JOAQUIN COUNTY
MOSQUITO & VECTOR CONTROL DISTRICT

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CHRISTOPHER K. ELEY
LEGAL ADVISOR

June 13, 2001

The Honorable Mayor
City of Lodi
P.O. Box 3006
Lodi, CA. 95241

Dear Dr. Alan Nakanishi,

The San Joaquin County Mosquito & Vector Control District (District) would like to appear before the Council to provide a short presentation regarding District activities, operations, and services provided to the residents and visitors of Lodi. The presentation will include the status of various vectors and vector-borne diseases in San Joaquin County, along with updated information on vector control services available to your constituents.

If you would like additional information or would like to schedule a presentation, please call me at 368-5132.

Sincerely,

Aaron Devencenzi
Community Education Specialist

7759 SOUTH AIRPORT WAY, STOCKTON, CALIFORNIA 95206-3918
(209) 982-4675 • FAX (209) 982-0120

San Joaquin County
Mosquito & Vector Control
District

Presentation Outline

Introduction

Background of District

Mission Statement (attached)

Integrated Pest Management

1. Surveillance
New Jersey Light Traps
Zones – Inspecting industrial, agricultural & residential
Sentinel chicken flocks for encephalitis blood tests
Health Dept. contacts regarding malaria

2. Control Measures
Truck mounted sprayers
Aircraft
Mosquitofish
Vegetation Management
Legal abatement

3. Other services provided
Feral & Africanized Bees Hives
Removal of potentially hazardous hives
Tick surveillance
Community Education

MISSION STATEMENT

The San Joaquin County Mosquito and Vector Control District provides comprehensive vector surveillance and control services to enhance public health and quality of life for residents and visitors of San Joaquin County. As a locally controlled independent agency we seek to fulfill our mission through the following commitments:

- *To utilize the most advanced administrative and operational technology available;*

- *To provide stewardship for public funds by stressing efficiency in our operations;*

- *To encourage citizen participation in achieving our mission;*

- *To educate the public regarding the health implications of disease transmitting pests;*

- *To provide services consistent with an awareness and concern for environmental protection;*

- *And lastly, to provide and maintain a safe and effective public health pest management program.*

The Board of Trustees
San Joaquin County
Mosquito & Vector Control District
Adopted May 21, 1996

Q. *HOW SHOULD A TICK BE REMOVED?*

A. Grasp tick with tissue or tweezers (never with bare hands), as close to your skin as possible. If ticks are crushed with bare fingers, exposure to the tick body fluids may lead to transmission of the disease organism. Gently pull the tick from the skin.

DO NOT TWIST, "UNSCREW," BURN WITH CIGARETTE, APPLY KEROSENE, OR OTHER IRRITANTS TO THE TICK! These methods will cause the tick to release more of its body fluids onto your skin.

Apply an antiseptic to the bite area after removing the tick. Wash hands with soap and water. If the tick cannot be removed or part of it is left in the skin, consult your physician.

Q. *CAN PETS GET LYME DISEASE?*

A. Lyme disease can also occur in dogs. Contact your veterinarian for information on preventive vaccinations, special collars and sprays which are available for dogs.

For more information on ticks and Lyme disease in your area, contact your local mosquito and vector control district or agency.

SAN JOAQUIN COUNTY MOSQUITO
AND VECTOR CONTROL DISTRICT
7759 SOUTH AIRPORT WAY
STOCKTON, CA 95206-3917
Telephone
(209) 982-4646

LYME DISEASE

(Lyme Borreliosis)

MOSQUITO AND VECTOR CONTROL ASSOCIATION OF CALIFORNIA
8633 Bond Road, Elk Grove, CA 95624
(916) 685-2600

Q. *WHAT IS LYME DISEASE?*

A. Lyme disease is a preventable bacterial infection transmitted to humans by the bite of the Western Black-legged tick, *Ixodes pacificus*. Lyme disease was named for Old Lyme Connecticut where it was first recognized. In 1978 the first cases were reported in California, and it has since become the most common tick-borne disease in California as well as in the United States.

Q. *WHAT CAUSES LYME DISEASE?*

A. Lyme disease is caused by a spiral-shaped bacterium (spirochete) identified in 1981, and named *Borrelia burgdorferi.* This bacterium mainly inhabits the digestive tract of deer ticks (*Ixodes genus*). The tick acts as a "vector" transmitting the Lyme disease bacterium to humans through its bite.

Q. *WHAT ARE TICKS?*

A. Ticks are tiny, insect-like creatures that can be found on grasses, brush and in wooded areas. They live by biting warm-blooded animals inhabiting these areas and sucking their blood. The adult female has a scarlet fringe around her hind parts. The adult males are smaller and entirely brownish-black. The immature ticks are called larvae and nymphs. The larvae are slightly larger than the period at the end of this sentence.

Q. *WHAT ARE THE EARLY SIGNS AND SYMPTOMS OF LYME DISEASE?*

A. Within 30 days of infection, a characteristic bull's-eye rash may appear at the site of the tick bite. This is known as Erythema m Migrans (EM). It is usually accompanied by fatigue, headache, stiff neck, muscle aches and pains, and general malaise. About half of Lyme disease patients never exhibit the classical EM rash. For such people the physician has greater difficulty making the correct diagnosis.

Q. *WHAT ARE THE ADVANCED SYMPTOMS OF LYME DISEASE?*

A. Possible complications may include chronic arthritis of one or more large joints, nervous system abnormalities and irregularities of heart rhythm.

Q. *DOES TREATMENT EXIST FOR LYME DISEASE?*

A. If treated early with antibiotics, Lyme disease can often be cured. Different antibiotic regimens are used against different stages. The treating physician is best equipped to make the choice of specific antibiotics. Early treatment shortens the course of Lyme disease and reduces the frequency of late complications such as arthritis. It is most important, therefore, to diagnose Lyme disease and begin therapy as quickly as possible.

Q. *WHAT PREVENTATIVE MEASURES CAN AN INDIVIDUAL TAKE AGAINST LYME DISEASE?*

A. Some precautions can be taken to reduce exposure to tick bites.

☞ Wear light colored clothing so ticks can be seen and removed before they become attached to skin.

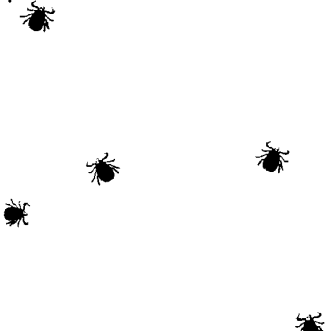
☞ Wear long pants and long-sleeved clothing.

☞ Tuck pants into socks or boots, and shirt into pants.

☞ Use approved repellents around shoes, ankles and on exposed skin. Be sure to follow the label instructions!

☞ Choose wide trails and walk in the center. Avoid brushy and grassy areas and off-the-trail hikes.

☞Thoroughly check yourself, your children and pets for ticks.



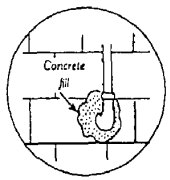
Reducing AHB colonies

Homeowners should periodically inspect their property for potential AHB colonies.

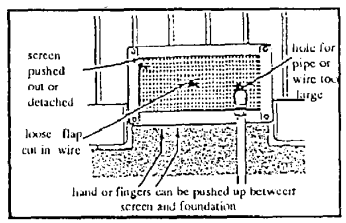
Building maintenance

AHBs can enter and establish a colony inside any small exterior openings of a house. A homeowner can reduce AHB colonies by:

- sealing any opening larger than 1/8 inch, such as pipe entrances on walls and where stucco meets brick or wood



- repairing or replacing damaged vent screens on foundation and eaves

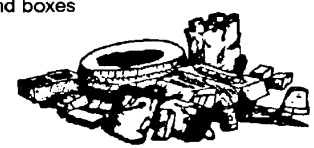


Yard maintenance

AHBs can build colonies on any structure or plant in a yard. A homeowner can reduce AHB colonies and make these sites more visible by:

- trimming overgrown shrubs and trees

- removing empty containers and trash, especially tires and boxes



- filling in ground holes

If you discover a swarm or colony of bees

AVOID THE AREA
Keep children and pets away from a swarm or colony

NOTIFY ✆
A pest control company or governmental authorities

If you are attacked by bees

LEAVE AREA QUICKLY
Attack could last until victim vacates the area

COVER FACE
Use clothes to protect eyes and mouth from bees

SEEK SHELTER
Inside enclosures where bees cannot enter such as a car, house, or other building

First aid for bee stings

For any bee sting:

- ☞ Remove stinger quickly by scraping with a fingernail or edge of a dull thin object

For **allergic** reactions:

- ☞ As soon as possible seek professional medical care
- ☞ Watch for breathing difficulties

For **multiple stings or hypersensitive individuals:**

- ☞ Immediately get professional medical care
- ☞ Do not wait for symptoms to develop

For more information call:

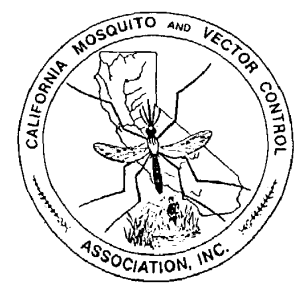
SAN JOAQUIN COUNTY MOSQUITO
AND VECTOR CONTROL DISTRICT
7759 SOUTH AIRPORT WAY
STOCKTON, CA 95206-3918
Telephone (209) 982-4675
Within S.J. County 1-800-300-4675

K. Boyce & S. Maggy, Sac/Yolo MVCD
K. Costa, SCC VCD **10/93**

PREPARING FOR AFRICANIZED HONEY BEES

Actual size

ALIAS "*KILLER BEES*"



General Information

The Africanized honey bee (AHB) has migrated into California. The first AHB swarms arrived at the southern border of California in October 1993. AHBs are predicted to continue moving northward into other areas of California that domestic European honey bees (EHBs) now inhabit. It is expected that AHBs will eventually replace unmanaged EHBs.


EHB

actual size

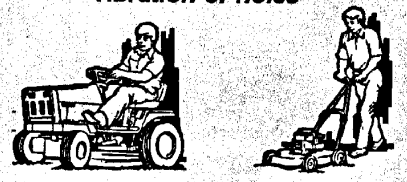

AHB

AHBs look the same and in most ways behave like the EHBs that currently reside in the United States. One very important difference between the two varieties is the ultra defensive behavior AHBs can display while protecting their colony location. In some South American attacks, AHBs have seriously stung or killed pets, livestock, and humans. This behavior has earned AHBs the common name "Killer Bees".

Activities that can cause a stinging attack

AHBs react to activities farther from the colony than EHBs.

Vibration or noise

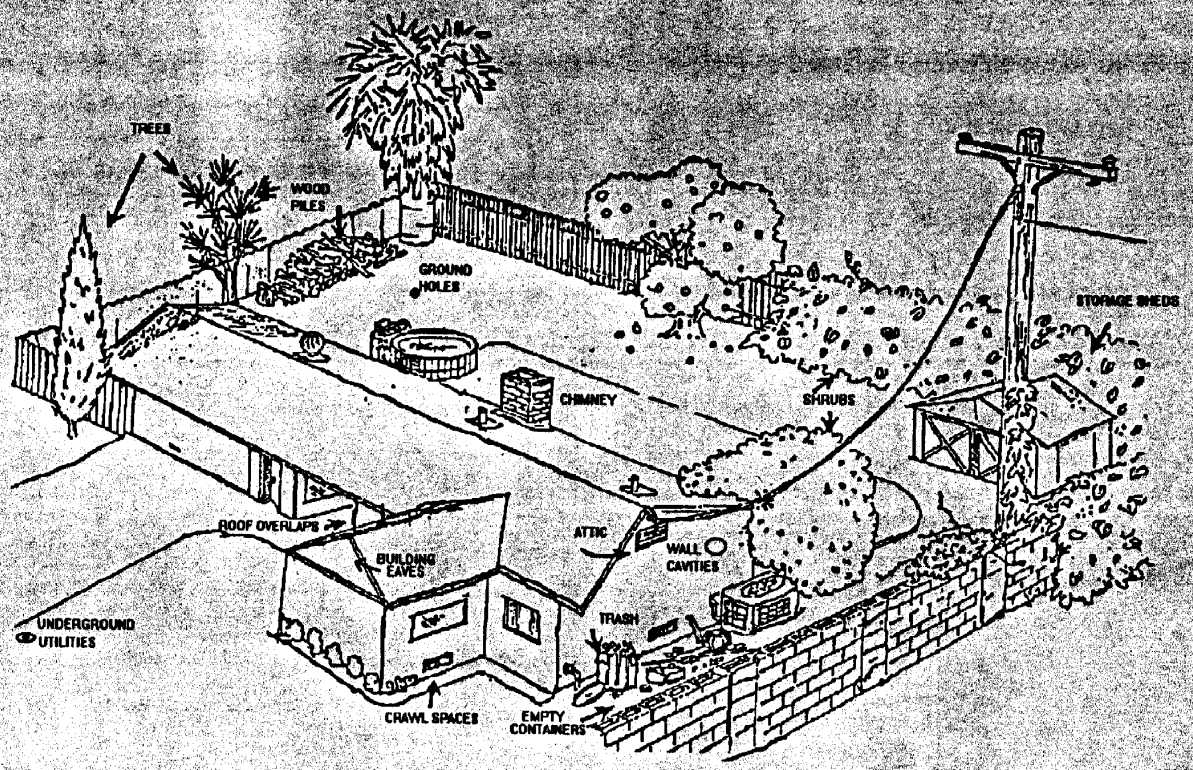


Operation of power equipment within 100 feet or more of colony

Motion

Movement within 50 feet or more of the colony

Potential AHB colony locations around the home



Important differences between AHBs and EHBs

Pursuit distance

AHBs will chase a person a longer distance than EHBs

AHBs..... up to 1/4 mile (4 football fields)

EHBs..... 100 feet (1/3 of a football field)

Defensive reaction period

AHBs will remain agitated longer than EHBs after a colony is disturbed.

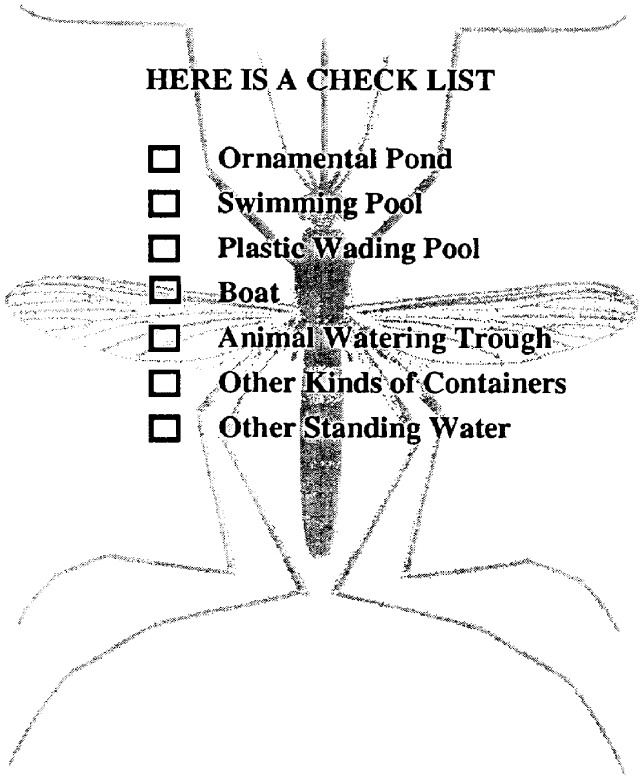
AHBs..... 8 or more hours before defensive reaction subsides

EHBs..... perhaps 1 or more hours before defensive reaction subsides completely

ARE YOU RAISING

MOSQUITOES

IN YOUR BACKYARD?



HERE IS A CHECK LIST

- ☐ Ornamental Pond
- ☐ Swimming Pool
- ☐ Plastic Wading Pool
- ☐ Boat
- ☐ Animal Watering Trough
- ☐ Other Kinds of Containers
- ☐ Other Standing Water

A vector is any insect or other arthropod, rodent, or other animal of public health significance capable of causing human discomfort, injury, or capable of harboring or transmitting the causative agents of human disease.

FACTS ABOUT MOSQUITOES
WHERE TO LOOK AND WHAT TO DO ■ INSECTS THAT RESEMBLE MOSQUITOES
COMMON BREEDING SOURCES
MIDGES ■ MOSQUITO-BORNE DISEASE
MOSQUITO FISH ■ WHAT WE DO TO CONTROL MOSQUITOES

FACTS ABOUT MOSQUITOES

1 – All mosquitoes must have water in which to complete their life cycle.

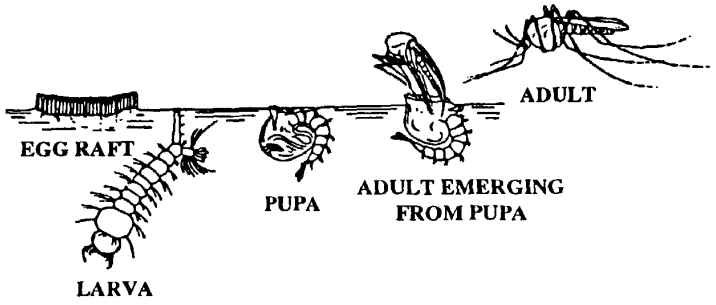
2 – Only seven days are required to complete their life cycle (egg to adult) during warm weather.

3 – Mosquitoes do not develop in grass or shrubbery, although flying adults frequently rest in these areas during daylight hours.

4 – Only the female mosquito bites to obtain a blood meal. The male mosquito feeds only on plant juices.

5 – The female mosquito may live as long as three weeks during the summer or many months over the winter in order to lay her eggs in the following spring.

THE MOSQUITO LIFE CYCLE



EGGS: The most common mosquitoes lay egg rafts that float on the water. Each raft contains from 100 to 400 eggs. Within a few days the eggs hatch into larvae.

LARVA: The larva or "wiggler" comes to the surface to breathe through a tube called a siphon. It sheds its skin or molts four times during the next several days. It grows rapidly between each molt. On the fourth molt it changes into a pupa.

PUPA: The pupa or "tumbler" cannot eat. It breathes through two tubes on its back. The adult mosquito grows inside the pupa and in two days or so, when it is fully developed, it splits the pupal skin and emerges to complete the life cycle or metamorphosis of the mosquito.

ADULT: The newly emerged adult rests on the surface of the water until it is strong enough to fly away and feed.

INSECTS THAT RESEMBLE MOSQUITOES

MOSQUITO

Characteristics

- Bites using its proboscis.
- Wings as long or longer than body.
- Always breeds in water.
- May carry disease.

CHIRONOMID MIDGE

Characteristics

- Cannot bite (no proboscis).
- Develop in mud on bottoms of lakes and ponds.
- Body longer than wings.
- About same size as mosquito.

CRANE FLY

Characteristics

- Cannot bite (proboscis, if present, unable to penetrate skin).
- Develop in moist soil or water.
- Fly very poorly.
- Usually larger than a mosquito.

FUNGUS GNAT

Characteristics

- Cannot bite (no proboscis).
- Develop in fungus or moist decaying vegetation.
- Have "spiny" legs.
- About same size as mosquito.

WHERE TO LOOK AND WHAT TO DO

ORNAMENTAL PONDS —
Stock with mosquito fish. Add goldfish for looks if desired. Avoid spraying with garden insect sprays. Remove leaves and thin out pond lilies. Keep water level up. Screen inlet of recirculation pump. Chlorine kills fish—transfer fish to glass bowl when cleaning pond. If pond is no longer desired, break holes in bottom and fill with dirt or sand.

CONCRETE OR PLASTIC SWIMMING POOLS —
Operate filter and skimmer everyday to remove egg rafts and larvae. Provide drainage for filter and pump sumps. Chlorine will NOT kill mosquito larvae. If pool cover is used, keep it tightly sealed. Remove rainwater from top of pool cover. Stock unused or "out-of-order" pools with mosquito fish.

BOATS —
Prevent accumulation of bilge water. Store small boats upside down or cover to keep out the rain and water from sprinklers.

ANIMAL WATER TROUGHS —
Stock large troughs with mosquito fish. Clean small troughs every week.

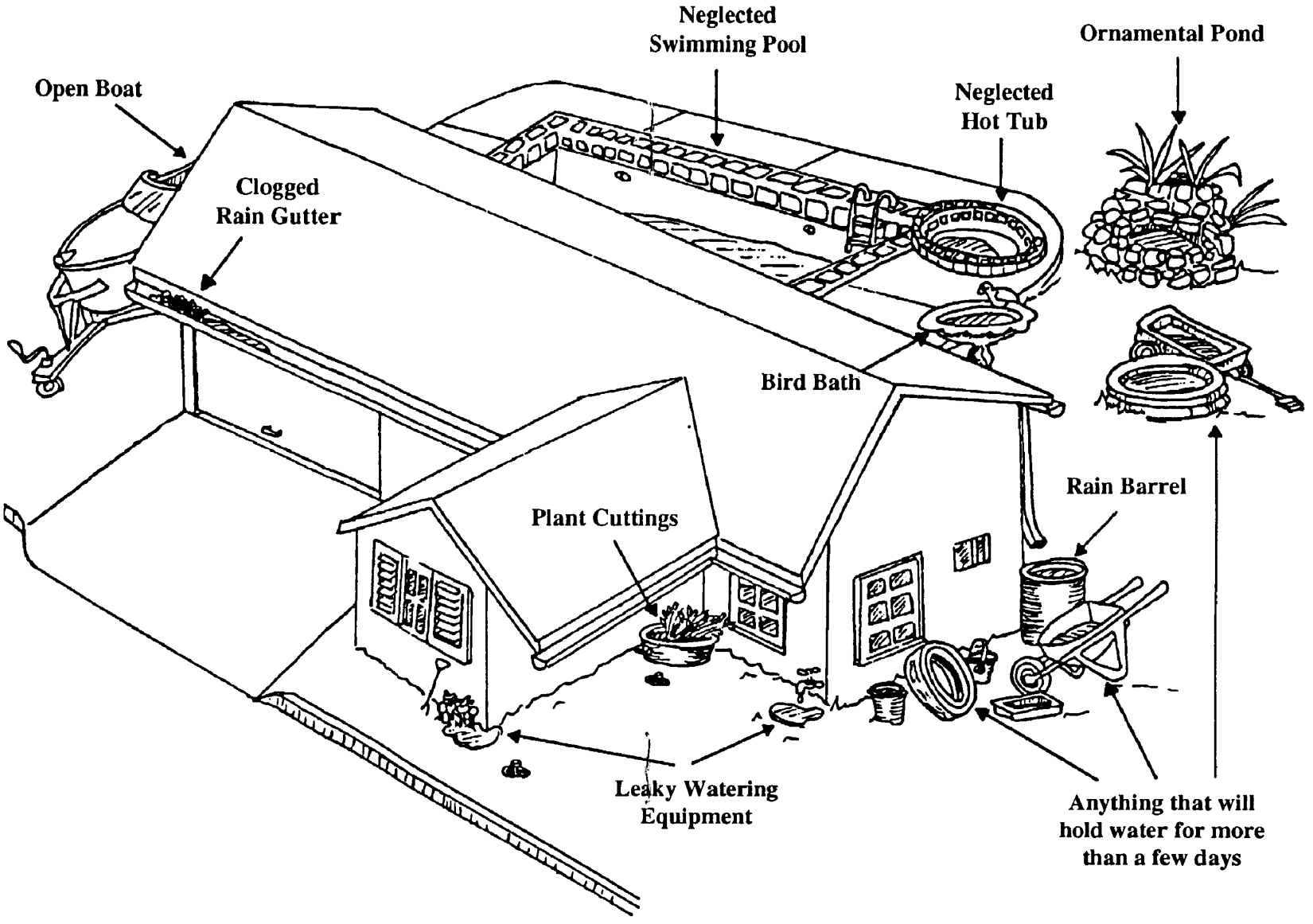
OTHER KINDS OF CONTAINERS —
Remove and dispose of all unused containers that will collect rain or water from sprinklers.

Cans	Old Tires
Jars	Buckets
Barrels	Tubs, etc.

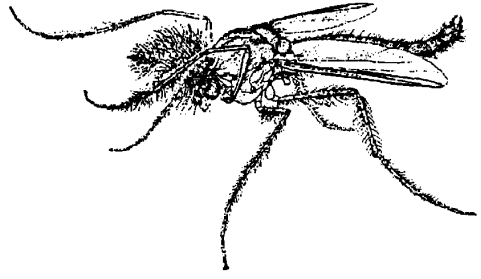
Home gardeners rooting plant cuttings in vases, buckets, etc. should change water every week.

Usable containers should be stored upside down.

COMMON BACKYARD MOSQUITO BREEDING SOURCES



MIDGES



Chironomid Midge

Chironomid midges cannot bite and are not harmful to public health. They can be a public nuisance because they develop in great numbers. They gather in swarms and when at rest they cover screen doors, windows, and walls. They look much like a mosquito and develop in the same water where mosquitoes develop. On a closer look, however, the midge:

1. Does not have biting mouthparts (proboscis).
2. Has a body (abdomen) that is longer than the wings.

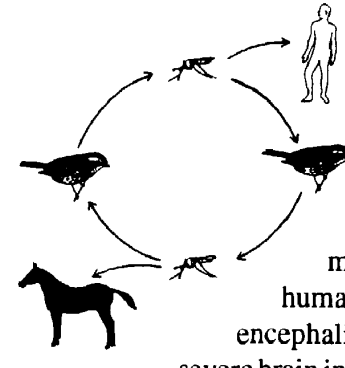
WE DO EVERYTHING WE CAN TO PREVENT THE DEVELOPMENT OF ADULT MIDGES

Control of midge larvae is much more difficult than the control of mosquito larvae because the midge larvae live in the bottom mud and are much less vulnerable to our mosquito insecticides as well as to mosquito fish. Satisfactory control currently depends on continuing studies and research on new insecticide formulations and other possible control methods.

MOSQUITO-BORNE DISEASE

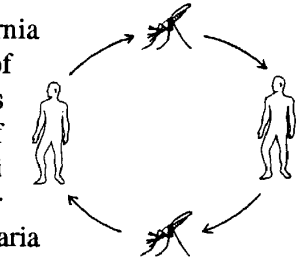
Several of the 48 known species of mosquitoes in California can carry disease under the right conditions. When a female mosquito takes an animal blood meal, which she uses as nourishment for her developing eggs, she may transmit certain disease causing organisms to humans and other animals. These organisms are taken with blood from infected humans and other animals. The mosquito completes the cycle when she bites the next susceptible host, causing infection. The two most important diseases affecting humans are encephalitis and malaria.

ENCEPHALITIS



There are two forms of viral encephalitis transmited by mosquitoes in California, St. Louis and Western Equine. Both are carried into an area by wild birds that are infected elsewhere. These birds show no symptoms. Infected birds are then fed on by local mosquitoes that can pass the virus on to humans through future bites. Symptoms of encephalitis range from mild flu-like illness to severe brain involvement that can cause death. Western Equine Encephalitis can affect horses and other equine animals as well as humans.

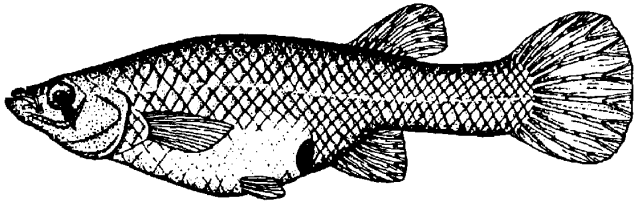
MALARIA



Malaria is much less likely to occur in California due to the necessity for human reservoirs of the disease. *Anopheles* mosquitoes, the vectors of malaria, are found in some areas of California, and there have been isolated instances where human reservoirs from other countries temporarily provided a source of malaria infection to local residents.

FISH PREVENT MOSQUITOES

Gambusia affinis, called "mosquito fish," are indispensable to our mosquito control program. They eat mosquito larvae as fast as they hatch from the eggs. **Mosquito fish are furnished without charge** for stocking ornamental ponds, unused or "out-of-order" swimming pools, and animal water troughs. They require no feeding and care is limited to protecting them from garden sprays and from chlorine or other chemicals used to clean the pond. We also stock thousands of these fish each year in artificial lakes, reservoirs, waste water disposal lagoons, natural creeks, and drainage channels to eliminate the need for frequent spraying with a mosquito insecticide.



Gambusia affinis

FACTS ON MOSQUITO FISH

Mosquito fish do not lay eggs, but rather give birth to well developed and very active young. These fish, therefore, require no special environment, as most other fishes do, for depositing and hatching the eggs. They breed throughout the summer and new broods are produced at intervals of about six weeks, with 50 to 100 young in a single brood. The young are approximately 1/4 inch in length when born. They are ready to begin the work of destroying mosquito larvae at once. *Gambusia* grow rapidly, reaching a maximum size of about three inches. The earliest broods of the season, born in April and May, become sexually mature and produce young when six to eight weeks old.

WHAT WE DO TO CONTROL MOSQUITOES

OBJECTIVES

The objectives of our program are to abate existing mosquito breeding sources and to prevent new ones in order to permit full use and enjoyment of our backyards and our many recreational facilities, to permit mosquito free agricultural and industrial working conditions, and to protect public health and comfort.

PROPERTY OWNERS RESPONSIBILITY

The owner of the property on which a breeding source is located is responsible for the abatement of the nuisance and for the prevention of its recurrence. We inform the property owner of the mosquito breeding and assist him in working out a satisfactory correction. In extreme cases, where the owner does not accept his responsibility to the public, the nuisance may be abated and a lien filed against the property as provided by the California State Health and Safety Code.

BREEDING SOURCES WE CONTROL

Chronic breeding sources created by standing water in street catch basins, subdivision drains, roadside ditches, flood channels, ravines, and similar places on public rights-of-way are controlled by routine larviciding operations throughout the year as necessary. We work with city, county, state, and federal agencies toward permanent correction of these sources.

SAN JOAQUIN COUNTY MOSQUITO
AND VECTOR CONTROL DISTRICT
7759 SOUTH AIRPORT WAY
STOCKTON, CA 95206-3918
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Within S.J. County
1-800-300-4675

MVC

ASSOCIATION
of CALIFORNIA

Acknowledgments

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OCVCD

January 1994